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Technical Report~~

BART-San Francisco Airport Extension Project [1995]
Draft Environmental Impact Report /
Supplemental Draft Environmental Impact Statement

Archaeological Resources Technical Report

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BART-San Francisco Airport Extension Project
Draft Environmental Impact Report /
Supplemental Draft Environmental Impact Statement

Archaeological Resources Technical Report

June 1994
(Revised December 1994)

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Rice, Carolyn.

BART-San Francisco
Airport extension
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Table of Contents

1. MANAGEMENT SUMMARY	1
2. PROJECT DESCRIPTION	1
2.1 Proposed Project - Locally Preferred Alternative (LPA)	1
2.2 Alternative I – No Build	4
2.3 Alternative II – Transportation Systems Management (TSM)	4
2.4 Alternative III – BART to Airport Intermodal Station (Base Case)	4
2.5 Alternative IV – BART Aerial East of Highway 101 to Millbrae	4
2.6 Alternative V – Millbrae Intermodal (Minimum Length Subway in Downtown San Bruno)	4
2.7 Alternative VI – Millbrae Avenue via the Airport International Terminal	5
3. PREHISTORIC SETTING AND RESOURCES	5
3.1 Natural Setting	5
3.2 Cultural Setting	5
4. METHODS	6
4.1 Research	6
4.2 Field Survey	7
4.3 Archaeological Testing	10
5. REPORT OF FINDINGS	10

Table of Contents (cont.)

6. MANAGEMENT CONSIDERATIONS	10
7. REFERENCES	14

List of Figures

1 Regional Location	2
2 Project Corridor	3
3 Archaeological Survey Area	8
3a Archaeological Survey Area	9

List of Tables

1 Results of Archaeological Testing at Site SMA-299	11
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List of Appendices

A Personnel Qualifications	A-1
B Record Search Receipt	B-1
C Agency Correspondence	C-1

List of Confidential Appendices

A Archaeological Site Record	
B Archaeological Testing Locations	

1. MANAGEMENT SUMMARY

From August to October, 1993, a literature search, field survey, and archaeological testing were performed for a Draft Environmental Impact Report (EIR) and Supplemental Draft Environmental Impact Study (SDEIS) for the BART-San Francisco International Airport Extension. The field reconnaissance was performed only in areas not previously surveyed for the initial cultural resources studies completed in 1991 (see Chavez, 1991). An augering program was performed on the one previously recorded prehistoric site on the alignment (SMA-299), in which no archaeological soils were uncovered. The lack of surface integrity for SMA-299 precludes it, thus far, from significance, pursuant to the *National Register of Historic Places* (36 CFR Section 60.4) and the *California Environmental Quality Act* (Appendix K, Section III. A. 2. D). Because there remains a potential for subsurface cultural deposits, monitoring in archaeologically sensitive areas during construction is recommended. A copy of the following report is available on file at the Northwest Archaeological Information Center at Sonoma State University, and field notes for this undertaking have been retained by the author.

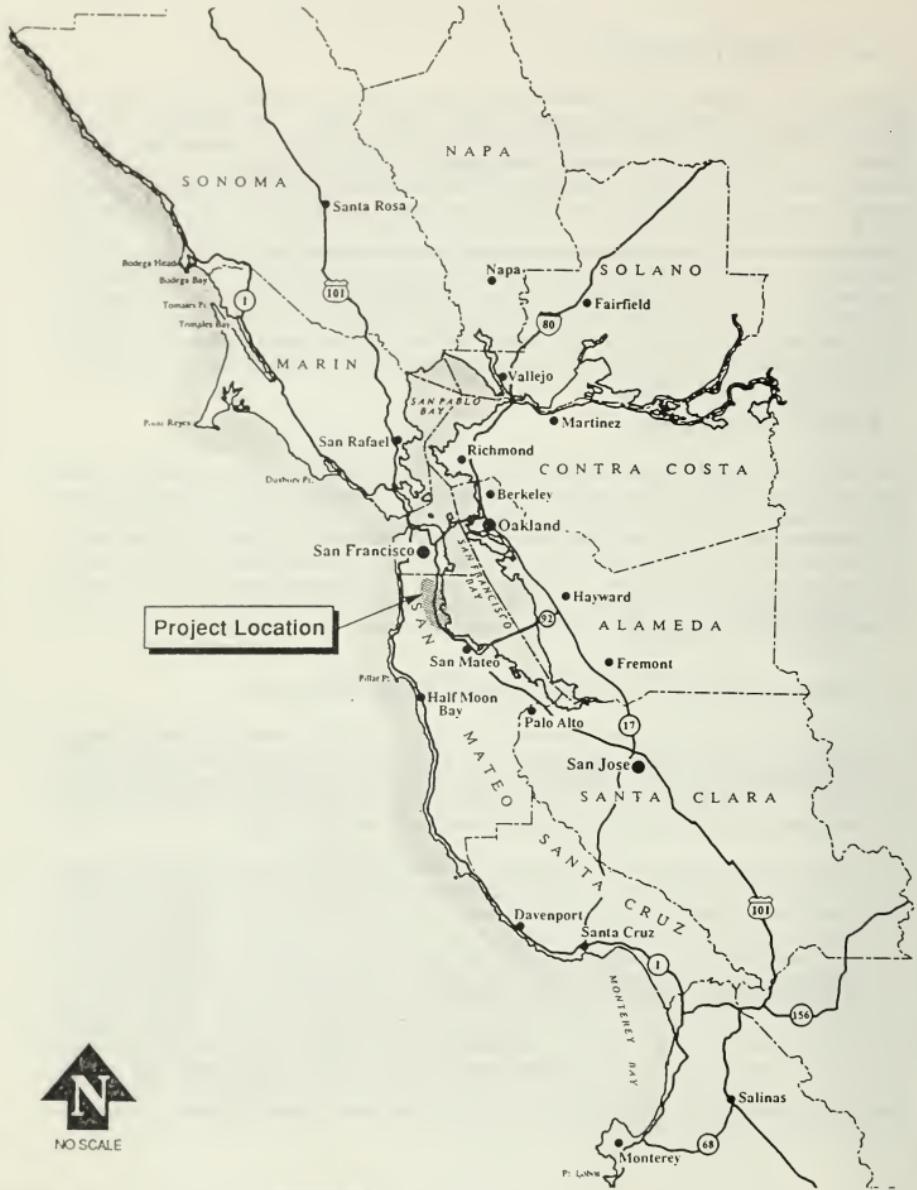
2. PROJECT DESCRIPTION

The Bay Area Rapid Transit District (BART), in cooperation with the Federal Transit Administration (FTA), the Metropolitan Transportation Commission (MTC), and the San Mateo County Transit District (SamTrans), is undertaking the preparation of a Draft EIR and Supplemental Draft EIS for the BART-San Francisco International Airport Extension Project. The project location is illustrated in Figures 1 and 2. The following discussion describes the proposed project and alternatives. In addition, BART is contemplating several design options that address construction techniques, alignments, and station layouts. Because these options do not affect the findings or conclusions of this report, they are not described here.

2.1 PROPOSED PROJECT – LOCALLY PREFERRED ALTERNATIVE (LPA)

The proposed project is the Locally Preferred Alternative (LPA) for extending BART from the Colma BART Station (under construction) to a San Francisco International Airport (SFIA) Intermodal Station, selected by the BART and SamTrans Boards of Directors and the MTC at the conclusion of the Alternatives Analysis/Draft Environmental Impact Statement/Draft Environmental Impact Report (AA/DEIS/DEIR) study process in June 1992.

The proposed project begins at the Colma BART Station (currently under construction), extends south in subway via the abandoned Southern Pacific Transportation Company (SPTCo.) San Bruno branch right-of-way, and then ascends to an at-grade Tanforan Station at the South San Francisco/San Bruno city limits. South of the Tanforan Station, as it turns east under the CalTrain main line tracks, the alignment would descend into a subway configuration. The proposed project would continue along the north side of I-380 until its junction with U.S. 101. At this point, the alignment would turn south under I-380 and continue in subway along the easterly limit of the City of San Bruno. The alignment would veer in a southwesterly direction across Airport property west of U.S. 101 and then ascend to an at-grade intermodal station west of U.S. 101, about one mile west of the Airport terminals. An Airport Light Rail System, constructed and operated by the Airport, would connect the intermodal station with Airport terminals and employment sites. South of the Airport Intermodal Station, tailtracks would extend about 3,000 feet toward Millbrae.



OGDEN

Regional Location

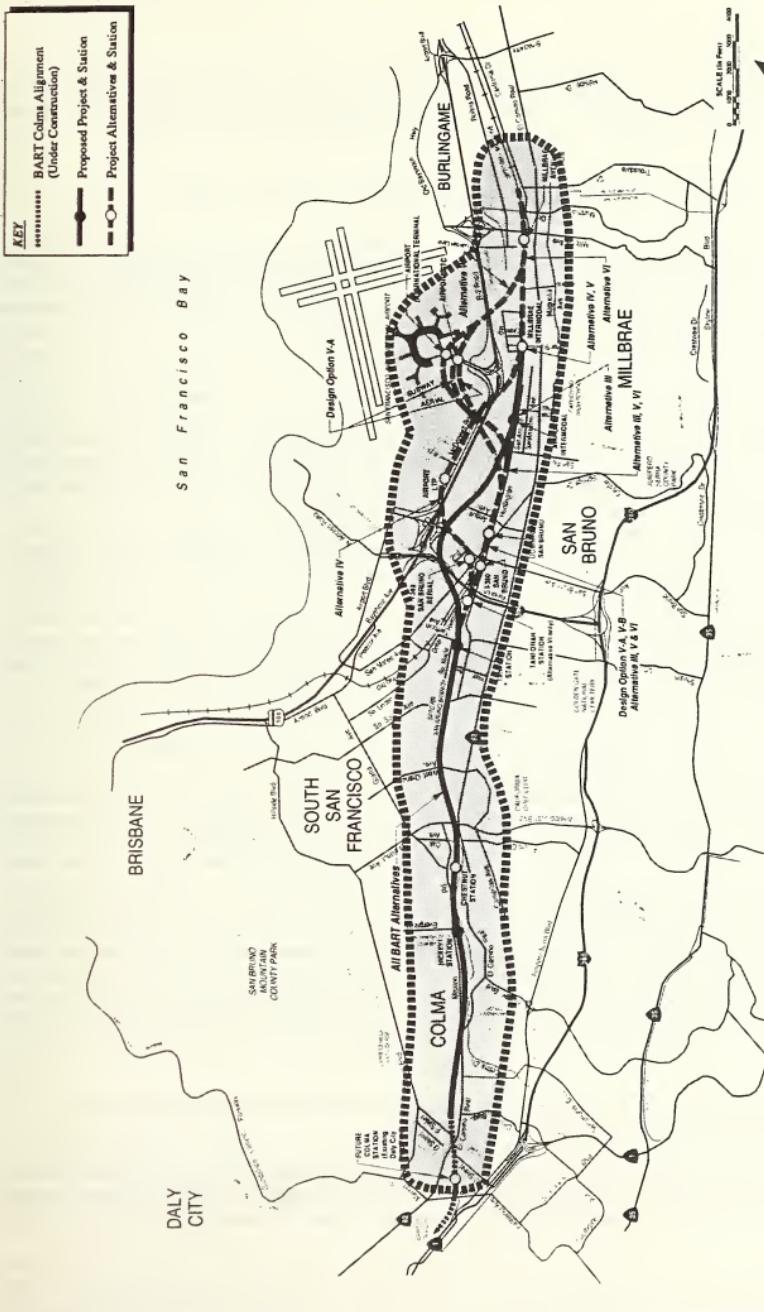
FIGURE

1

FIGURE

2

Project Corridor



OGDEN

2.2 ALTERNATIVE I – NO BUILD

Under the No Build Alternative, there would be no BART extension to the Airport and no changes are assumed for the study area, except for any approved and funded projects.

2.3 ALTERNATIVE II – TRANSPORTATION SYSTEMS MANAGEMENT (TSM)

The TSM Alternative includes currently planned or funded major transportation improvements within the study area, including increased CalTrain service, an extension of San Francisco MUNI Metro to Fourth and Townsend Streets in San Francisco, the repair of earthquake-damaged freeway sections, and local circulation roadway improvements. The TSM also includes a CalTrain/Airport Light Rail Station west of U.S. 101.

2.4 ALTERNATIVE III – BART TO AIRPORT INTERMODAL STATION (BASE CASE)

The alternative follows the SPTCo San Bruno branch right-of-way between the future Colma BART Station tailtrack and an Airport Intermodal Station in San Bruno. The alignment would be built in open, retained cut structure from the Colma Station tailtrack to Mission Road, and then in a combination of at-grade and open retained cut to a below-grade Chestnut Station. South of the Chestnut Station, Alternative III would remain in retained cut to South Spruce Avenue. South of South Spruce Avenue, the alignment would rise to grade and proceed to the Tanforan Station. The alignment would continue south within the SPTCo. right-of-way and begin to ascend so that it would be above ground in an aerial structure as it traverses downtown San Bruno. South of downtown, BART would descend to an at-grade Airport Intermodal Station located west of the Airport terminals and U.S. 101. An Airport Light Rail System, constructed and operated by the Airport, would connect the intermodal station with Airport terminals and employment sites. An at-grade tailtrack would extend about 3,000 feet beyond this terminus.

2.5 ALTERNATIVE IV – BART AERIAL EAST OF HIGHWAY 101 TO MILLBRAE

Under Alternative IV, BART would follow the proposed project alignment from the Colma tailtrack to north of Tanforan Avenue. Near I-380, the alignment would rise to an aerial structure and turn east into the San Bruno Avenue corridor. Under this alternative, the location of the San Bruno station would be determined in cooperation with the City of San Bruno. The current proposal calls for an aerial station between I-380 and San Bruno Avenue, east of the SPTCo.right-of-way. The BART aerial alignment would continue east, cross over U.S. 101, and then curve south to parallel the highway on Airport property. BART would parallel the I-380 on-ramp viaduct and proposed Airport Light Rail System. The alignment would continue south on an aerial structure to an airport station by the long-term parking area. South of this station, BART would cross U.S. 101 in subway and then rise to an at-grade Millbrae Intermodal Station at Center Street along the SPTCo right-of-way. An approximately 3,000-foot tailtrack would extend at-grade south of the Millbrae station.

2.6 ALTERNATIVE V – MILLBRAE INTERMODAL (MINIMUM LENGTH SUBWAY IN DOWNTOWN SAN BRUNO)

This alternative is identical to the proposed project from the end of the Colma Station tailtrack to north of Tanforan Avenue. Under this alternative, too, the location of the San Bruno station would be determined in cooperation with the City of San Bruno. In the vicinity of I-380, BART

would descend to a subway through downtown San Bruno. South of Angus Avenue, BART would ascend to grade and proceed to a Millbrae Intermodal Station near Center Street. An approximately 3,000-foot tailtrack would extend at-grade south of the Millbrae Intermodal Station.

2.7 ALTERNATIVE VI – MILLBRAE AVENUE VIA THE AIRPORT INTERNATIONAL TERMINAL

Alternative VI follows the same alignment as the proposed project between Colma Station tailtrack and South Spruce Avenue. South of South Spruce Avenue, the alignment would stay below grade in open retained cut to the Tanforan Station. South of the Tanforan Station, the alignment would be in a minimum length subway through downtown San Bruno from San Bruno Avenue to Angus Avenue. The BART alignment would turn east under Highway 101 in subway, then turn south to a subway Airport International Terminal Station. BART passengers would access the proposed International Terminal by elevators and escalators and other terminals by walking or transferring to the proposed Airport Light Rail System. South of the Airport International Terminal Station, BART would curve southwest under U.S. 101 and then rise to an at-grade Millbrae Avenue BART/CalTrain Station. There would be an at-grade BART turnback and tailtrack which would extend south of Millbrae Avenue approximately 3,000 feet.

3. PREHISTORIC SETTING AND RESOURCES

3.1 NATURAL SETTING

The San Francisco Peninsula region encompasses the largest estuarine system in California. One of its principal features is San Francisco Bay, which is located near the proposed project's eastern boundary. Much of this bordering marshland has been reclaimed for urban purposes, after massive silting from the Gold Rush and landfill projects. The Peninsula's bayfront was also altered drastically over the past 15,000 years, when the melting of continental glaciers caused a rise of sea level that shifted local beaches more than 25 kilometers east. The archaeological significance of these geologic events is at least three-fold: 1) the natural environment of the Bay underwent almost continuous change during the past 15,000 years; 2) prehistoric peoples' adaptations to the estuarine environment evolved when marine waters began invading San Francisco Bay less than 8,000 years ago; and 3) villages and other sites on former shorelines must be buried under marine sediments (Moratto, 1984).

The prehistoric Bay Area was rich in natural resources that were used in abundance by the native populations. Rocks and minerals such as obsidian, cherts, cinnabar, and schist were excellent material for making tools, ornaments, trade goods, and weapons. The diverse habitats of the prehistoric San Francisco Bay Area, from saltmarsh to redwood forests, supplied a varied and abundant diet of game, fowl, fish, shellfish and vegetal foods to the early populations. In sum, the ample resources available in the Bay region permitted the growth of large populations that could both fulfill their domestic needs and provide valuable materials for trade.

3.2 CULTURAL SETTING

Early inhabitants of the study area were bound neither ethnically nor politically. The aboriginal groups of the southern San Francisco Bay region were assigned the name "Costanoan" (derived from the Spanish *Costanos*, or "people of the coast") at Euro-American contact. The project area lies in the vicinity of two former *Ramaytush*-speaking, or San Francisco Costanoan tribelets that

were documented at historic contact: *puyson* (Arroyo de San Francisco) and *lamsin* (Las Pulgas).

The population of the Costanoans at the time of European contact has been estimated between 7,000 and over 10,000 (Kroeber, 1924; Levy, 1978; Moratto, 1984). These individuals lived within tribelets, or villages and smaller settlements that were linked socially and located within a territory bounded by other ethnic groups. The political structure of each tribelet included a chief and a council of elders who were responsible for making group decisions (Harrington, 1933). The Costanoans built their villages primarily at confluences of two water bodies or in ecological transition zones, where the abundance of biotic resources is greatest. These people subsisted on a multitude of native vegetation species such as berries, plants, bulbs, seeds, and nuts (primarily the acorn). In addition, the Peninsula's early inhabitants hunted large mammals such as deer and elk, and fished from a large variety of freshwater and marine fish and shellfish.

By the early 19th century, disease and the destructive impact of the mission system reduced the Costanoan population to a small number of manual laborers who were forced by the Mexican government to live first in missions, and later in ranchos. Currently, approximately 200 persons of partial Costanoan descent reside in northern and central California (Levy, 1978).

Although information regarding the Costanoans is far from complete, early accounts were written by explorers, missionaries, and anthropologists. Primary ethnographic information may be found in the following:

- Harrington, John P. 1942. Culture Element Distributions. XIX: Central California Coast. University of California Anthropological Records 7(1):1-46. Berkeley.
- Heizer, R.F. 1978. Handbook of North American Indians. Volume 8: California. Washington, D.C.: Smithsonian Institution.
- Heizer, R.F. and M.A. Whipple. 1951. The California Indians: A Source Book. Berkeley: University of California Press.
- Kroeber, A.L. 1925. Handbook of the Indians of California. Bureau of American Ethnology Bulletin 78. Government Printing Office. Washington D.C.

Historic information for this project is being prepared under separate cover by Laurence Shoup, Ph.D. and Mark Brack of Archaeological/Historical Consultants, historical subconsultants on the BART-San Francisco International Airport Extension EIR/EIS.

4. METHODS

4.1 RESEARCH

Prior to performing a field survey and performing subsurface testing, the author performed a records, literature and archival review at the regional repository for archaeological surveys, located at the Northwest Information Center, Sonoma State University (File No. 93-295). Reference material on file at the Bancroft Library and Map Room of the University of California, Berkeley was also consulted. This review indicated that a survey of the project corridor conducted in 1991 affirmed the presence of a known prehistoric site (discussed below), with an absence of surface cultural resources elsewhere in project boundary. Portions within one mile of each of the proposed project alignments were also surveyed within the past 15 years, which

documented the absence of cultural materials on surface areas (Surveys 3043, 3057, 3134, 3074, 10402, 12201 and 13543).

San Mateo County site 299 (SMA-299) was recorded in 1989 by Barbara Bocek of Stanford University during the San Francisquito Archaeological Project. She described the site as "a large shell midden with shell in patches of varying density, on [the] north and south banks of the creek... early residents describe it as a single huge midden site more than two kilometers in length." The integrity of the site, or the state in which it was found, was recorded as "completely destroyed, not only by creek channelization, railroad tracks and other construction, but by systematic mining of the midden itself as 'Colma Loam,' sold as gardening soil in the 1930-1950's." Information regarding the site itself appears to be based primarily on an early letter written by William Wihr of San Francisco. Other records, if in existence, were not made available to the author by Stanford University at the time of this report.

4.2 FIELD SURVEY

On September 9, 1993, Carolyn Rice, M.A. and Robyn Talman, M.A. conducted the initial archaeological survey to identify possible existing historic or prehistoric cultural materials in an unsurveyed portion of the project area. An archaeological survey is defined as follows:

Inspection of all land surfaces that can reasonably be expected to contain visible archaeological resources. Every portion of the project area whose surface can be seen without major modification of vegetation, and where it is reasonably possible that human activities that would leave traces might be carried out, is inspected in a general surface reconnaissance. Every foot of ground is not necessarily covered. A general surface reconnaissance is the functional equivalent of a complete reconnaissance (investigation of every visible portion of the project area) in areas where soil, vegetation, or other conditions make it highly likely that some kinds of archaeological phenomena would be preserved, or where conditions obscure such phenomena to a point at which they could not be observed without undertaking large scale brush clearing, grading, etc. (King et al., 1973; Edwards, 1979).

The walk-over was conducted by using a straight-line pattern at 10-meter intervals to ensure full coverage of the unsurveyed portion of proposed project area, a minimally developed wetland area between the SPTCo. corridor adjacent to San Felipe Avenue to the west and U.S. 101 to the east (see Figure 3). On Friday, May 13, 1994, Carolyn Rice performed a supplemental foot reconnaissance survey of the expanded APE, a small area approximately .5 kilometers long and .3 kilometers wide (see Figure 3a). The supplemental survey area is located approximately .8 miles northeast of the intersection of El Camino Real and Millbrae Avenue in the City of Millbrae. The same methods were used as those of the initial survey; ground visibility was poor, approximately 8 percent. Ground disturbance in this area is almost complete, due to residences, the railroad corridor, the PG&E substation, and tennis courts.

United States Geological Survey (USGS) maps and black and white copies of aerial photographs were carried into the field for periodic consultation. Mason's trowels were used to clear brush where soils supported plant species indicative of archaeological soils (such as California poppy and blackberry). In the wetland area, Common Cattail (*Typha sp.*) and numerous other species of native plants were located. Indications from historic maps and the presence of minimally disturbed native vegetation in the vicinity suggest that undisturbed prehistoric material may be present beneath the ground surface.

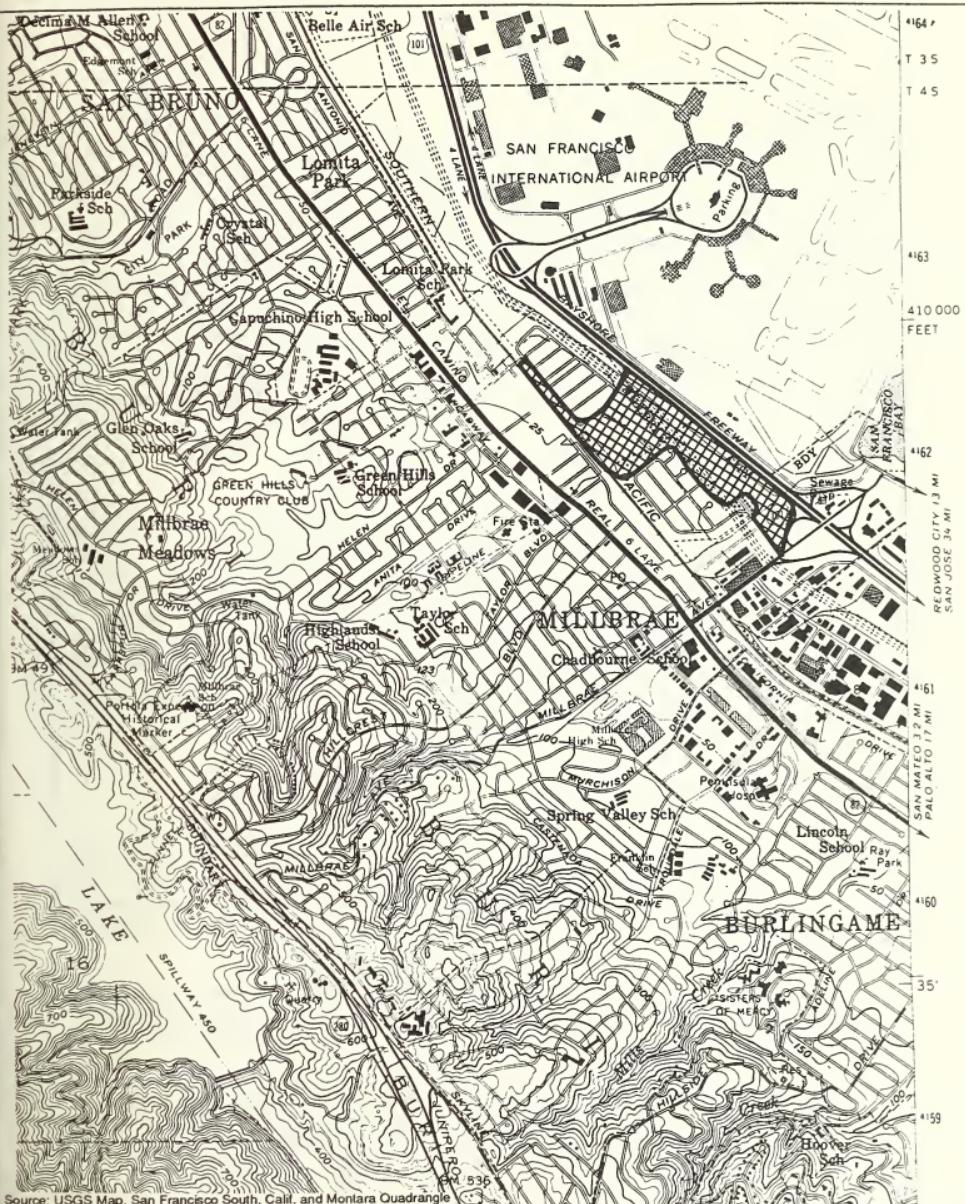
FIGURE

3

Archaeological Survey Area

SCALE (In Feet)
0 500 1000
N
SOURCE: USGS Map, San Francisco South, Calif.
and Monterra Quadrangle
California - San Mateo Co., 7.5 Minute Series
1:250,000





FIGURE

Source: USGS Map, San Francisco South, Calif. and Montara Quadrangle, California - San Mateo Co. 7.5 Minute Series (Topographic)

Area of Potential Effect/ Archaeological Survey Area

4.3 ARCHAEOLOGICAL TESTING

The testing phase of the prehistoric studies for the proposed BART-San Francisco Airport Extension was limited to shovel test pits and auger holes that were performed to determine the presence or absence of cultural material at the one previously known prehistoric site, SMA-299. The placement of 20 auger holes, randomly placed approximately 15 meters apart, approximately .3 meter in diameter and ranging from 15 centimeters to 1 meter in depth, resulted in the absence of archaeological soils throughout the site vicinity (see Confidential Appendix B and Table 1). The auger holes were placed on a 1.5 kilometer alignment on the west side of the SPRR tracks in the site area recorded in 1989 (see Confidential Appendix A). The soil from each unit was examined for cultural material: midden soil (formed by food refuse), shell, or artifactual constituents such as obsidian or flaked chert. A small amount of soil from the bottom of each unit was tested for its pH balance, which is also an indicator of midden soil. As discussed below, no cultural material was found during this preliminary testing phase. Controlled excavation units, therefore, were not performed.

5. REPORT OF FINDINGS

As stated in Section 4.1, San Mateo County site 299 was recorded previously in the proposed BART alignment in South San Francisco. The site record, completed in 1989, states that the site has been "completely destroyed" (see Confidential Appendix A). Destructive factors stated in the site record include soil mining of the midden in the 1930s to 1950s, the channelization of Colma Creek, and the construction of the SPTCo rail line. Broken rock — often a remnant of prehistoric habitation — was located in abundance on the surface, but never associated with anthropic soil, or in a cultural context. During the field survey, it appeared that large equipment was used recently to scrape and pile surface dirt and fill. In addition, construction of the large parking garage for Kaiser Hospital, located directly west of the former site, and landscaping appear to have contributed to completely erasing all traces of the site.

6. MANAGEMENT CONSIDERATIONS

The project area contains one known prehistoric site (SMA-299), and the potential exists for subsurface prehistoric material to be uncovered at this site during project excavation and construction. Because the area of development, grading, and ground disturbance for the Locally Preferred Alternative and each of the its alternatives includes the area of SMA-299, the potential impacts to this site would be the same for each. Accordingly, the following impact statements apply to all alternatives.

- The author's field reconnaissance survey and testing program established only the absence of surface remains; this type of investigation and testing cannot completely determine whether buried deposits are present. Trenching associated with the development may disturb these resources.
- The proposed area of impact for this project does not include any known structures or sites significant to ethnic or religious values. Impacts to ethnic or religious values, therefore, are not expected from the alternatives being considered for the proposed BART-San Francisco International Airport Extension Project.

Table I
Results of Archaeological Testing at Site SMA-299

Unit No.	Unit Description and Matrix	pH Level*	Status
1	Near corner of 2nd & B streets. Apparent change of matrix: yellow clay 15 cm. to surface, dark brown silt below.	3.4 @ 60 cm.	sterile
2	Completely disturbed with 1.8 meters of fill atop concrete sidewalk. Dark brown silt.	5 @ 50 cm.	sterile
3	Some fire altered rock (FAR), poppies on surface; asphalt waste in medium brown silty clay.	4.5 @ 15 cm.	sterile
4	35 meters south of Colma Creek/SPTCo intersection. Very recent surface burn. Compacted, fill soil, medium to light yellow-brown, sand increasing with depth.	5 @ 70 cm.	sterile
5	Pre-existing surface excavation to 35 cm. Major modern disturbance. Some shell in medium brown, silty and sandy soil.	4.5 @ 80 cm.	sterile
6	Deep excavation to ~4 meters behind car wash. Surface to 60 cm. is disturbed, mottled, medium yellow-brown sand with modern refuse.	4 @ 130 cm. 5 @ 230 & 150 cm.	sterile
7	Adjacent to rear end of nursery; abundant blackberry and bay laurel directly to south; planted fir to north. Dark brown silt.	3.5 @ 46 cm.	sterile
8	~45 paces south of end of berm west of tracks, north of intersection. Sample taken in hill, horizontally. Eucalyptus, wild oat and other grasses on surface; matrix of yellow sand.	4 @ 60 cm.	sterile
9	~26 paces from north end of Colma Creek channel, in bay laurel thicket. Disturbed surface layer of trash. Medium yellowish-brown sandy silt.	3.5 @ 30 cm.	sterile
10	Near 2nd & B Street intersection again, to west side of yellowish surface fill. Soil is dark brown, turning to yellow clayey sand at 80 cm. below surface.	3 @ 80 cm.	sterile
11	Adjacent southwest to SPTCo and Colma Creek intersection with abundant blackberry. Yellow sandy silt with gravel, asphalt and wood.	5 @ 100 cm.	sterile

*Measured in centimeters below surface; archaeological soils are generally over pH 6.5.

Table 1 (Continued)
Results of Archaeological Testing at Site SMa-299

Unit No.	Unit Description and Matrix	pH Level*	Status
12	In bay laurel; ~5 meters southwest of Colma Creek and SPTCo intersection. Disturbed, gravelly deposit; 70-90 cm.: moist yellowish-brown sand; 90-100 cm.: yellowish-brown sandy clay.	5 @ 100 cm.	sterile
13	Along footpath east of street-level Kaiser parking, ~2 meters west of Colma Creek curve. Yellowish-brown sandy silt with small cracked rock; probably fill/disturbance from channelization and Kaiser construction.	5 @ 24 cm.	sterile
14	~4 meters northwest of SPTCo and Colma Creek intersection. Yellowish-brown sand.	5 @ 80 cm.	sterile
15	~50 meters north of SPTCo and Colma Creek intersection in bay laurel. Yellowish sandy silt to medium brown sandy clay.	5 @ 90 cm..	sterile
16	~40 meters north of SPTCo and Colma Creek intersection, west of tracks. Medium brown sandy loam. Abundant blackberry, gravel, golf balls, and modern trash.	4 @ 60 cm.	sterile
17	~20 meters north of Colma Creek and SPTCo intersection, 4 meters west of tracks. Medium to dark brown sandy loam to clayey loam. Same disturbance as #16, but no blackberry.	5 @ 65 cm.	sterile
18	~10 meters north of Colma Creek and SPTCo intersection, ~5 meters west of tracks. Disturbed fill with asphalt. Sandy medium brown loam on surface, to medium to dark brown clayey loam beneath. One small piece charcoal.	5 @ 95 cm.	sterile
19	~10 meters west of SPTCo, between 2 northerly Kaiser buildings. Very hard, gravelly light yellow-brown sandy loam to medium brown sandy loam. Glass, gravel disturbed. Yellow sand "dunes" to east, before SPTCo. Totally disturbed fill.	5 @ 55 cm.	sterile
20	In bay laurel east of northernmost Kaiser building, ~2 meters west of SPTCo. Medium brown, sandy loam. Modern refuse.	5 @ 100 cm.	sterile

*Measured in continuous below surface; archaeological soils are generally over pH 6.5

The following mitigation measures would reduce the potential loss of known prehistoric cultural resources to less than significant.

1. **Construction Monitoring**. Trench excavation and other earth-disturbing activities at and in the vicinity of site SMA-299 will be monitored by a SOPA-qualified archaeologist during project construction. The use of a monitoring archaeologist would ensure the identification of significant resources and the protection of these potential resources from negative impacts and damaging effects. Significant cultural materials include, but are not limited to, human remains, altered stone, shell and bone artifacts, concentrations of fire altered rock, ash, charcoal, shell, and bone, and historic features such as building foundations or privies. If any cultural remains are uncovered during the course of altering any sites, work within ten feet of the resources should be stopped immediately. Appropriate authorities (such as the local coroner, in the case of human burials) and a SOPA-qualified archaeologist should be retained to investigate the site's potential archaeological value.

Mitigation of the cultural resources may include monitoring of further construction and/or systematic excavation of the remains. Cultural materials collected as part of the discovery, monitoring or mitigation phases must be properly conserved, catalogued, analyzed, evaluated, and curated according to current archaeological standards set by the State Historic Preservation Officer.

7. REFERENCES

- Advisory Council on Historic Preservation. Guidelines for Making "Adverse Effect" and "No Adverse Effect" Determinations for Archeological Resources in Accordance with 36 CFR Part 800. Washington, D.C. 1976.
- Advisory Council on Historic Preservation. 36 CFR Part 800: Protection of Historic Properties Regulations of the Advisory Council on Historic Preservation Governing the Section 106 Review Process. Washington, D.C. 1986.
- Advisory Council on Historic Preservation. Section 106, Step-by-Step. Washington, D.C. 1986.
- Archaeology Consulting and Research Services, Inc. Report of an Archaeological Reconnaissance of the City of Millbrae's Madrone Street Sewage Lift Station and Interceptor Sewer Project, Santa Cruz. November 1978.
- Baker, Suzanne. Archaeological Reconnaissance for the Proposed San Andreas Pipeline No. 3, San Mateo County, San Francisco. April 1979.
- Basin Research Associates, Inc. A Cultural Resources Assessment for the San Francisco Resource Supply Stud. Daly City to City of San Mateo, San Mateo County, California, San Leandro. November, 1988.
- Beck, W.A. and Y.D. Haase. Historical Atlas of California. University of Oklahoma Press, Norman. 1974.
- BioSystems, Inc. Technical Report of Cultural Resources Studies for the Proposed WTG-West, Inc. Los Angeles to San Francisco and Sacramento, California Fiber Optics Cable Project, Santa Cruz. October 1989.
- Bocek, Barbara. Prehistoric Settlement Pattern and Social Organization on the San Francisco Peninsula, California. In Between Bands and States. Susan A Gregg, Ed. Center for Archaeological Investigations, Occasional Paper No. 9, Southern Illinois University. 1991.
- California Department of Parks and Recreation. Office of Historic Preservation, California Inventory of Historic Resources. The Resources Agency, Sacramento. 1976.
- California Department of Parks and Recreation. Office of Historic Preservation, California Historical Landmarks. The Resources Agency, Sacramento. 1982.
- Chavez, David. Cultural Resources Evaluation of the Colma Wastewater Collection System, Town of Colma, San Mateo County, California, Mill Valley. November 1977.
- Chavez, David. Cultural Resources Evaluation for the San Francisco International Airport Master Plan EIR, San Mateo County, California, Mill Valley. 1990.
- Chavez, David. Cultural Resources Investigations for the BART-San Francisco Airport Extension Alternatives Analysis, EIS/EIR, Mill Valley. December 1991.
- Clark, Matthew. Initial Archaeological Evaluation of Proposed Park Additions and a Portion of the Colma Creek Channel for the Orange Memorial Park Master Plan EIR, South San Francisco, California. Martin Carpenter Associates, El Granada. March 1992.

- Davis, James T. Trade Routes and Economic Exchange Among the Indians of California. UC Archaeology Survey Reports 54, Berkeley. 1961.
- Edwards, Robert. Recommendations for Archaeological Impact Evaluations: Procedures and Guidelines for Archaeological Consultant Qualifications - Prepared for Santa Clara County California Archaeological Site Inventory, Cabrillo College, Aptos. 1979.
- Elsasser, A.B. Development of Regional Prehistoric Cultures. In California, edited by R.F. Heizer, Volume 8, Handbook of North American Indians, pp. 37-57. Smithsonian Institution, Washington, D.C. 1978.
- Hamilton, J. Indian shell mounds of San Mateo Creek and vicinity. Manuscript, San Mateo: Museum of San Mateo Historical Association. 1936.
- Harrington, John P. Report of Fieldwork on Indians of Monterey and San Benito Counties. Washington, D.C.: Smithsonian Institution, Bureau of American Ethnology Annual Report for 1931-1932. 1933.
- Harrington, John P. Culture Element Distributions. XIX: Central California Coast, University of California Anthropological Records 7(1):1-46, Berkeley. 1942.
- Heizer, R.F. The Direct Historical Approach in Central California Archaeology. American Antiquity, 7:98-122. 1941.
- Heizer, R.F. The Archaeology of Central California: I, The Early Horizon. UC-AR, Vol. 12, No. 1. 1949.
- Heizer, R.F. and M.A. Whipple. The California Indians: A Source Book. Berkeley: University of California Press. 1951.
- Heizer, R.F. Handbook of North American Indians, Volume 8: California. Washington: Smithsonian Institution. 1978.
- Hynding, Alan. From Frontier to Suburb: The Story of the San Mateo Peninsula. Star Publishing Co. Belmont. 1982.
- King, R.F., M.M. Moratto, and N.N. Leonard III. Recommended Procedures for Archaeological Impact Evaluation. Society for California Archaeology Publication. 1973.
- Kroeber, A.L. Indian Myths of South Central California. University of California Publications in American Archaeology and Ethnology 4(3):65-166, Berkeley. 1907.
- Levy, R. Costanoan. In California, edited by R.F. Heizer. Handbook of North American Indians, Volume 8. Smithsonian Institute, Washington D.C. 1976.
- Margolin, Malcolm. The Ohlone Way: Indian Life in the San Francisco - Monterey Bay Area. Heyday Books, Berkeley. 1978.
- Moratto, Michael J. Contributions to the Archaeology of San Mateo County. Treganza Anthropology Museum Papers, San Francisco State College: Volume 1. 1971.
- Moratto, Michael J. California Archaeology. Orlando: Academic Press, Inc. 1984.

- Nelson, N.C. Shellmounds of the San Francisco Bay Region. UC-PAAE, Vol. 7, No. 4. 1909.
- Nichols, Donald R. and Nancy A. Wright. Text and References Accompanying Preliminary Map of the Historic Margins of Marshland, San Francisco Bay, California. United States Department of the Interior, Geologic Survey. 1971.
- Oliphant, Robert L. The Archaeology of 4-SMA-101. In Contributions to the Archaeology of San Mateo County, Treganza Anthropology Museum Papers, No. 8. J. Moratto, Ed., San Francisco. 1971.
- Parsons, Brinckerhoff Quade & Douglas, Inc. and Associated Consultants. BART-San Francisco Airport Extension Alternatives Analysis/Draft EIS/EIR Social and Physical Impacts and Mitigation Report, San Francisco. September, 1991.
- Parsons, Brinckerhoff, Quade & Douglas, Inc. and Associated Consultants. BART-San Francisco Airport Extension Alternatives Analysis/Draft EIS/EIR. Chapter 3 Affected Environment, San Francisco. September 1991.
- San Mateo County. Official Maps of San Mateo County. 1868, 1877, 1888, 1890, 1902, 1927, 1950, 1960.
- Stanger, Frank M. South from San Francisco. San Mateo County Historical Association. 1963.
- Thomas Bros. The Thomas Guide: Santa Clara and San Mateo Counties Street Guide and Directory. Thomas Bros. Maps, San Francisco. 1987.
- United States Department of the Interior. Federal Register: National Register of Historic Places 44 (26, Book 2). 1979-1986, 1988.
- United States Geological Survey (USGS). Montara Mountain, Calif. (Quadrangle). Topographic map, Scale 1:24,000/7.5 minute series, Menlo Park. 1956, photorevised 1980.
- United States Geological Survey (USGS). San Francisco South, Calif. (Quadrangle). Topographic map, Scale 1:24,000/7.5 minute series, Menlo Park. 1956, photorevised 1980.
- Van Dyke, Stanley. The Archaeology of Site 4-SMA-101. In Contributions to the Archaeology of San Mateo County, Treganza Anthropology Museum Papers, No. 8. J. Moratto, Ed. 1971.
- Young, Daniel. Archaeological Survey Report for Widening Project. Department of Transportation. February 1976.

Appendix A

Personnel Qualifications

**Carolyn Rice
Consulting Archeologist
600 Grizzly Peak Blvd.
Berkeley, CA 94708**

SUMMARY OF QUALIFICATIONS

With over 8 years of experience on environmental field and laboratory projects in California and Hawaii, I direct cultural resources research tasks, surveys, and test/data recovery projects in a variety of settings. Associated responsibilities include client contact, personnel supervision, and preparation of draft and final reports. My qualifications include a thorough knowledge of NEPA, CEQA, NHPA (Section 106 compliance), and numerous other federal, state and local laws and regulations mandating environmental assessment. I bring with me the experience and perspective gained during the past two years of managing numerous multidisciplinary studies for both cultural resources and comprehensive environmental assessments, with responsibilities such as scheduling and coordinating project assignments, proposal preparation, project management, quality control/quality assurance, and group planning.

From proposal preparation to full-scale excavation, my experience has given me expertise in the following areas:

- Project management;
- Proposal, draft, and final (response to comments) report preparation;
- Archival and ethnographic research;
- Prehistoric and historic site assessment;
- Historic architecture significance analysis;
- Comprehensive and mixed-strategy archaeological surveys;
- Site recordation, including mapping and photography;
- Native American coordination;
- Artifact identification, cataloging, and drawing;
- Historic map and aerial photograph analysis; and
- Environmental education.

EDUCATION

M.A. Cultural Anthropology/Archaeology, San Francisco State University, 1992

B.A. Environmental Studies, University of California at Santa Cruz, 1985

PROFESSIONAL EXPERIENCE

1990 to 1993: Cultural Resources Specialist and Project Manager for Ogden Environmental and Energy Services Company, Inc. 221 Main Street, San Francisco, California 94105. Under the direct supervision of Rod Jeung and Ric Villasenor in San Francisco (415) 227-4370 and Richard Carrico and Andrew Pignolo in San Diego (619) 458-9044.

1985 to 1990: Part-time Consulting Archaeologist for numerous projects in Northern California.

Appendix B

Record Search Receipt

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

221 Main Street, Suite 1400
San Francisco, CA 94105
415 227 4370
Fax 415 227 4376

August 3, 1993

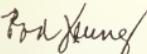
California Archaeological Inventory
Northwest Information Center
Foundation Building 300
Sonoma State University
1801 E. Cotati
Rohnert Park, CA 94928

To Whom it may Concern:

Ogden Environmental and Energy Services (Ogden Environmental) is currently preparing a Recirculated Environmental Impact Report for the BART - SF Airport project. We are hereby requesting a record search for the areas within a one-mile radius on each side of the two proposed project alignments (depicted on the enclosed map). Ogden authorizes the Northwest Information Center to devote up to four hours @ \$90 per hour for this task. Our project referral number is 3-1098-2001-0002.

Thank you, in advance.

Sincerely,


Rod Jeung
Project Manager

RJ/cr

Enclosure

California
Archaeological
Inventory



ALAMEDA	MARIN	SAN MATEO
COLUSA	MENDOCINO	SANTA CLARA
CONTRA COSTA	MONTEREY	SANTA CRUZ
DEL NORTE	NAPA	SOLANO
HUMBOLDT	SAN BENITO	SONOMA
LAKE	SAN FRANCISCO	YOLO

Northwest Information Center
Department of Anthropology
Foundation Center, Bldg. 300
Sonoma State University
Rohnert Park, California 94928
(707) 664-2494 • Fax (707) 664-3947

AGREEMENT OF CONFIDENTIALITY

FILE NO.: 93-X-48

I, the undersigned, have been granted access to archaeological data on file at the Northwest Information Center of the California Archaeological Inventory. I understand the confidential nature of this information and will not disclose specific site locations to unauthorized individuals or in publicly distributed documents without written consent of the State Historic Preservation Office.

I agree to submit completed site records and preliminary reports pertinent to this project to this Information Center no later than 30 days after completion of field investigation. Subsequent reports will also be forwarded.

I understand that failure to comply with the above agreement is grounds for denial of access to the archaeological data at the Northwest Information Center.

*** PLEASE SIGN AND RETURN THIS FORM. SEE ATTACHED INVOICE. ***

Name: Richard Carrico Signature _____ Date _____

Affiliation: Ogden Environmental Telephone _____

Address: 5510 Morehouse Drive, San Diego, CA 92121

Purpose of research: XX planning scientific/academic other

PROJECT: site record and report xeroxing for the Daly City Bart Extension

COUNTY: San Mateo

MAP: n/a

COMMENTS: Enclosed are copies of the site record for CA-SMA-299 and S-3155 (Chavez 1980). The bibliographic printout is of reports written by Chavez that are located on the San Francisco South 7.5' quad.

-----STAFF USE ONLY-----

Request Received

Telephone 8 July 1993

Fees

Staff processing: hour(s) @ \$90/hr. \$

Fax

In person research: day(s) @ \$90/day \$

In person

Xerox: 14 page(s) @ \$.10/pg. \$ 1.40

Mail

0.25 hour(s) @ \$15/hr. \$ 3.75

Response

Bibliography:

Telephone

staff/computer time: hour(s) @ \$30/hr. \$

Fax

Telephone surcharge \$10: \$

Mail

Topographic map surcharge,

add'l map(s) reviewed @ \$10 each: \$

Rapid Response surcharge: \$

Fax @ \$2 first page, \$1 thereafter: \$

Other: \$

Lisa C. Hagel
Information Center Staff

PLEASE ACCEPT THIS FORM AS AN INVOICE TOTAL: \$ 5.15
FOR \$5.15. MAKE YOUR CHECK PAYABLE TO THE SSUAF
AND REFERENCE THE ABOVE FILE NUMBER ON THE CHECK.



RECORDS SEARCH SUPPLEMENT
BIBLIOGRAPHY/XEROX REQUEST FORM & INVOICE

DATE OF REQUEST: Aug 16, 1993

NWIC FILE NUMBER: 93-X-66

DATE OF RESPONSE: _____

Name: Carolyn Rice

Affiliation: Ogden Environmental

Address: 221 Main St, Ste 1400, S.F. 94105

Phone#: 415-227-4370

Fax#: 415-227-41376

INFORMATION REQUESTED: CA-SMA-172/H

(See: 93-295) Bart Project SF/Airport Ext.

FEES:

Staff / Computer time: _____ hour(s) @ \$30.00/hr. \$ _____

Xerox time: .25 hour(s) @ \$15.00/hr. \$ 3.75
2 page(s) @ \$.10/pg. \$.20

Rapid Response Surcharge: \$ _____

Other: \$ _____

TOTAL: \$ 3.95

NOTES:

PLEASE ACCEPT THIS FORM AS AS INVOICE FOR 3.95. Please reference our file # on the remittance check, make the check payable to the SSU Academic Foundation, and send it to the above address. Thank you.

Maggie Beiley Porchelli
Information Center Staff

California
Archaeological
Inventory



ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
MARIN
MONTEREY
NAPA
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Department of Anthropology
Foundation Center, Bldg. 300
Sonoma State University
Rohnert Park, California 94928
(707) 664-2494 • Fax (707) 664-3947

AGREEMENT OF CONFIDENTIALITY

FILE NO.: 93-295

I, the undersigned, have been granted access to archaeological data on file at the Northwest Information Center of the California Archaeological Inventory. I understand the confidential nature of this information and will not disclose specific site locations to unauthorized individuals or in publicly distributed documents without written consent of the State Historic Preservation Office.

I agree to submit completed site records and preliminary reports pertinent to this project to this Information Center no later than 30 days after completion of field investigation. Subsequent reports will also be forwarded.

I understand that failure to comply with the above agreement is grounds for denial of access to the archaeological data at the Northwest Information Center.

*** PLEASE SIGN AND RETURN THIS FORM. SEE ATTACHED INVOICE. ***

Name: Carolyn Rice Signature Carolyn Rice Date 5-9-13

Affiliation: Odgen Environmental Telephone 415/227-4370

Address: 221 Main St Suite 1400 San Fran. 94105

Purpose of research: planning scientific/academic other

PROJECT: BART to San Fran. Airport

COUNTY: San Fran / San Mateo

MAP: San Fran. South / Marin area, etc.

COMMENTS:

-----STAFF USE ONLY-----

Request Received _____
Telephone _____
Fax _____
In person 7/9/13
Mail _____

Fees
Staff processing: _____ hour(s) @ \$90/hr. \$ 47.00
In person research: 1 day(s) @ \$90/day \$ 47.00
Xerox: 70 page(s) @ \$0.10/pg. \$ 7.00
hour(s) @ \$15/hr. \$ _____

Response _____
Telephone _____
Fax _____
Mail _____

Bibliography:
staff/computer time: _____ hour(s) @ \$30/hr. \$ _____
Telephone surcharge \$10: \$ _____
Topographic map surcharge,
add'l map(s) reviewed @ \$10 each: \$ _____
Rapid Response surcharge: \$ _____
Fax @ \$2 first page, \$1 thereafter: \$ _____
Other: \$ _____

TOTAL: \$ 97.00

Laura McFarlin
Information Center Staff

Appendix C

Agency Correspondence

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

221 Main Street, Suite 1400
San Francisco, CA 94105
415 227 4370
Fax 415 227 4376

August 27, 1993

Debbie Treadway
Native American Heritage Commission
915 Capitol Mall
Room 364
Sacramento, CA 95814

Re: BART San Francisco International Airport Recirculated Draft EIR/Supplemental Draft EIS Project

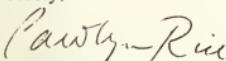
Dear Ms. Treadway:

Ogden Environmental and Energy Services Company, Inc. (abbreviated Ogden Environmental), in conjunction with Archaeological and Historic Consultants (AHC), Oakland, is currently preparing a recirculated Environmental Impact Report for the referenced project in both San Francisco and San Mateo counties. The project involves numerous historic resources that will be evaluated for their potential National Register eligibility. One prehistoric site (shell midden SMA-299) will be tested archaeologically for its potential eligibility to the Register. Diagrams of the alternatives proposed for the BART extension are provided with this letter.

We respectfully request any information and input that you may have regarding both Native American and historic concerns, either directly or indirectly associated with this project area. We would also be interested in knowing whether or not there are individuals in the area who should be contacted prior to the continuation of this project. If you have information, concerns, or other input, please submit them in writing, so that they may be incorporated in the final report.

We appreciate your assistance in this matter. If you have any questions or require any further information regarding this project, please contact me at 510/843-5709.

Sincerely,



Carolyn Rice
Cultural Resources Specialist

CR/rc

Enclosures

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

221 Main Street, Suite 1400
San Francisco, CA 94105
415 227 4370
Fax 415 227 4376

August 27, 1993

Hans Kreutzberg
State Historic Preservation Office
1416 9th St.
Sacramento, CA 95814

Re: BART San Francisco International Airport Recirculated Draft EIR/Supplemental Draft EIS Project

Dear Mr. Kreutzberg:

Ogden Environmental and Energy Services Company, Inc. (abbreviated Ogden Environmental), in conjunction with Archaeological and Historic Consultants (AHC), Oakland, is ready to proceed with the field investigations for the referenced project. The project involves numerous historic resources that will be evaluated for their potential National Register eligibility. One prehistoric site (shell midden SMA-299) will be tested archaeologically for its potential eligibility to the Register. Diagrams of the alternatives proposed for the BART extension are provided with this letter, along with a copy of correspondence with representatives of the Native American Heritage Commission.

Personnel who will provide cultural resources reports are listed with their phone numbers as follows:

- Laurence Shoup, History (510/654-8635)
- Mark Brack, Historical Architecture (510/644-8194)
- Carolyn Rice, Prehistory (510/843-5709)

We are eager to begin coordination with you in setting the APE and in meeting SHPO requirements and, therefore, will call you soon.

Sincerely,



Carolyn Rice
Cultural Resources Specialist

CR/rc

Enclosures

OGDEN

ENVIRONMENTAL AND ENERGY SERVICES

221 Main Street, Suite 1400
San Francisco, CA 94105
415 227 4370

SAMPLE OF LETTER SENT TO NATIVE AMERICAN REPRESENTATIVES Fax 415 227 4376

August 16, 1993

Andrew Galvan
P.O. Box 3152
Mission San Jose, CA 94539

Re: BART San Francisco International Airport Extension Project

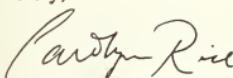
Dear Mr. Galvan:

Ogden Environmental and Energy Company, Inc., is currently preparing a recirculated Environmental Impact Report for the referenced project in both San Francisco and San Mateo counties. The project includes a corridor that is under potential impact from the proposed train route extension to San Francisco International Airport. The area under study is depicted on the enclosed map.

We respectfully request any information and input that you may have regarding both Native American and historic concerns, either directly or indirectly associated with this project area. We would also be interested in knowing whether or not there are individuals in the area who should be contacted prior to the continuation of this project. If you have information, concerns or other input, please submit them in writing, so that they may be incorporated in the final report.

We appreciate your assistance in this matter. If you have any questions or require any further information regarding this project, please contact me at the address listed above.

Sincerely,



Carolyn Rice
Cultural Resources Specialist

CR/rc

Enclosure

Name address telephone
Amah Tribal Band
Chairperson: Irene Zwierlein
789 Canada Road
Woodside, CA 94062
(415) 851-7747

Tribal affiliation
Ohlone

Esselen Nation
Chairperson: Loretta Escobar-Wyer
P.O. Box 464
Palo Alto, CA 94302
(408) 924-1572 Office
(415) 390-9919

Ohlone/Esselen

Andrew Galvan
P.O. Box 3152
Mission San Jose, CA 94539
(510) 656-0777
(510) 656-2364 Message

Ohlone

Frances Garcia
425 Queen Street, #33
King City, CA 93930-3719
(408) 385-5591

Ohlone/Salinan

Indian Canyon Mutsun Band of Costanoan People
Chairperson: Ann Marie Sayers Ohlone
P.O. Box 28
Hollister, CA 95024-0028
(408) 637-4238

Jakki Kehl
1675 North Corral Hollow Rd.
Tracy, CA 95376
(209) 832-7403

Ohlone

Kenneth Marquis
4659 Bolero Drive
San Jose, CA 95111
(408) 226-3357

Ohlone

<u>Name</u>	<u>address</u>	<u>telephone</u>	<u>Tribal affiliation</u>
Jenny Mousseaux (Mcleod)	P.O. Box 610546	San Jose, CA 95161	Salinan/Chumash/Ohlone
(408) 249-6049			
Muwekma Indian Tribe	Chairperson: Rosemary Cambra	1845 The Alameda	Ohlone
San Jose, CA 95126	(408) 293-9956		
Patrick Orozco	110 Dick Phelps Road	Watsonville, CA 95076	Ohlone
(408) 728-8471			
Alex Ramirez	4910 Alum Rock Ave	San Jose, CA 95127	Ohlone
(408) 923-0204			
Ella Mae Rodriguez	1188 Phoenix Ave, House B	Seaside, CA 93955	Ohlone
(408) 394-8176			
Linda Yamane	1385 Harding Street	Seaside, CA 93955	Ohlone
(408) 394-5915			

Confidential Appendix A

Archaeological Site Record

Confidential appendices are on file with FTA and BART, and may be examined there by qualified individuals upon request.

Confidential Appendix B

Archaeological

Testing Locations

Confidential appendices are on file with FTA and BART, and may be examined there by qualified individuals upon request.

